



# Washington State Enhanced Hazard Mitigation Plan

## Coordination of Local Mitigation Planning

The State Emergency Management Division (EMD) works with local jurisdictions to encourage and support local hazard mitigation planning, as well as mitigation project development and funding. The section's staff members provide ongoing assistance through on-site visits, assist local jurisdictions obtain grant funding for plan development and review, coordinate information requests of state government, and participate in local plan development activities.

### I. Local Funding and Technical Assistance

**Requirement 44 CFR §201.4(c)(4)(i): *Plan Content.*** To be effective the plan must include a section on the *Coordination of Local Mitigation Planning* that includes a description of the State process to support, through funding and technical assistance, the development of local mitigation plans.

#### Planning Initiatives 2007-2010:

The State EMD continued to provide support to local planning initiatives during this update cycle. As previous locals' plans continued to mature and plans previously completed in many communities were in the update phase, and Mitigation and Recovery Section staff provided several different means of training and technical assistance to assist with plan development. The method of conducting the plan review prior to submission to FEMA was also enhanced during this planning cycle.

The level of assistance requested and provided by Mitigation and Recovery Section staff varied by community and level of experience and knowledge of local staff, as well as by complexity of issues and numbers of jurisdictions involved in a particular plan.

Particular emphasis was placed on technical assistance during this planning cycle for a number of reasons, the first being the large number of plans anticipated for renewal between the 2008-2010 timeframe based on FEMA's five year update cycle, as follows:

- 2008 - seven plans were due;
- 2009 – 31 plans were due;
- 2010 - 20 plans are due.

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As of January 31, 2010, the actual breakdown of plan development is as follows:

- 25 +/- plans currently in the update cycle (some have gone through state and/or FEMA review and are making necessary changes);
- 36 jurisdictions have received grants for plan updates or development (represents FY07-FY10); and
- 25 +/- new plans are currently under development

(Note: In some cases, these numbers are represented in more than one category, e.g., received a *grant* for a *new plan* – included in both categories.)

Also a significant issue which directly impacted the update and development process throughout the state is the condition of the economy. As of 2009, 19 of 39 counties in Washington were considered *distressed*, meaning that each of the counties maintained a three-year average unemployment rate equal to or greater than 120% of the statewide unemployment rate. Because of this, many jurisdictions were required to reduce their work force and limit the amount of travel for their employees. This left a large void within many jurisdictions which lost personnel who, in many cases, were the people who had previously developed the mitigation plans.

Another contributing factor to the decision to enhance technical assistance was the fact that FEMA requirements had changed since the original plans were developed. Based on the number of local plans between 2007-2010 which were up for renewal, and the number currently in process, it was determined that additional training would be required to provide the local planners with the information necessary to complete the plans. However, this effort was further complicated by the fact that because of the state of the economy in many jurisdictions, travel was restricted, and personnel were not able to travel to receive the training.

In an attempt to pool resources and eliminate additional travel, it was determined that another approach would be to combine meetings. Therefore, in an effort to administer additional technical assistance to jurisdictions that would not otherwise have been able to attend training, the Mitigation Strategist attended meetings held in conjunction with other events which are well attended by representatives from across the state: the Partners in Preparedness Conference and the annual SERC/TERC/LEPC conference held in Eastern Washington.

Both of these conferences provided an opportunity for many jurisdictions to gain one-on-one assistance during their plan development, something many jurisdictions would not have been able to otherwise gain had the meetings not been paired together. For a few jurisdictions whose economy had been severely impacted, the State was able to provide training funds to assist in covering the cost for the locals to attend training. In addition, an extensive amount of one-on-one technical assistance was also provided via telephone and web-based meetings, as well as several workshops, and many on-site technical assistance sessions.

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During this plan update cycle, the State Hazard Mitigation Strategist provided the technical assistance, which, as indicated, was administered in various methods and covered many different aspects of planning.

### Methods of Delivering Technical Assistance:

- site visits – one-on-one or planning teams
- workshops
- attendance at kick-off meetings
- via phone and conference calls
- web-based meetings
- emails
- written correspondence
- classroom setting
- attendance at public meetings
- samples and templates

### Areas in which Technical Assistance was Provided (non-inclusive but most common areas where assistance was provided):

- update versus new plan – differences and what is needed
- kick-off meetings to detail process involved
- public meetings – what fulfills this requirement
- meeting with local planning teams to assist with issue resolution
- mitigation strategy development
- gaining public input and participation
- risk analysis
- capabilities assessment
- plan layout
- data gathering - sources
- HAZUS-MH development
- Benefit-Cost Analysis (BCA) development
- planning process
- planning team development – who should be involved
- NFIP requirements
- Repetitive/Severe Repetitive Loss Properties
- funding sources
- coordination with local planning mechanisms
- inclusion of local jurisdictions, special purpose districts – level of involvement/add-on
- review of plan drafts while under development (to make certain any issues the jurisdiction was experiencing were being handled immediately rather than waiting until the plan was completed)
- GIS maps for jurisdictions that do not have GIS capabilities (provided by Tetra Tech - Ed Whitford, and Military Department GIS - Cathy Walker).

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### Requests for Proposals - Bidding Process for Contractor Selection:

- assistance with development of the scope of work for contract bids (some jurisdictions require engineering studies for projects as part of their contracts)
- review of bids to determine thoroughness and level of services provided (e.g., were all requirements of plan development included?)
- selection process for contractors – assisted with the creation of questions to ask which would indicate level of experience and knowledge base of contractors

### Samples/documentation provided to jurisdiction at onset of planning phase:

At the beginning of the plan update or development, the Mitigation Strategist provided templates and information to each jurisdiction which would assist in the process.

Providing samples of previously-approved annexes, plans, templates, etc., proved to be very effective for many jurisdictions, especially those who were new to planning. Below are some of the examples provided to the planners:

- Crosswalk (new requirement by the state that locals must complete crosswalk and submit along with plan to the state – since this policy was enacted, level of plan accuracy increased dramatically)
- Planning Guidance
- Matrix of Change for Plan Updates
- Community add-on language
- Risk analysis – samples of various ways in which a risk analysis can be conducted
- STAPLEE worksheets
- Special Purpose District Annexes (fire, hospital, school district, water district)
- Resolution for Adoption
- Templates for information gathering (Tetra Tech provided these to the state and has authorized their dissemination to local jurisdictions to assist with plan development for regional and local annexes)
- NFIP guidelines/requirements (provided to us from FEMA Region X)
- Public Meeting Notice
- Newspaper Ads announcing community meetings

In addition to the samples provided, Mitigation and Recovery Section Staff also provided several workshops and training events during this plan update cycle, to include:

### Training and Workshops:

BCA (2 classes; 1 in Everett; 1 at Camp Murray) June 2009 (40 students)

G318 Mitigation Planning Training January 2009 (36 students)

Risk Analysis Class provided June 2009 and February 2010 (61 students)

Technical Assistance Workshops September and November 2009 (30 jurisdictions in attendance – several jurisdictions sent entire planning team)

HAZUS-MH training provided through JFO February 2008, April, May 2009 (27 students)

HAZUS-MH training provided by EMD July 2009, February 2010 (29 students)

HAZUS L313 & L296 by EMI at Camp Murray March 2010 (33 students)

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In total, during the 2008-2010 timeframe, EMD either provided or coordinated training for a total of 216 students involved in mitigation planning efforts in a classroom setting. Additionally, 40 students attended BCA training for use not only to enhance grant applications, but also mitigation strategy development, as many jurisdictions are completing BCA evaluations on their various structural projects for prioritization of mitigation actions.

### Datasets for Risk Analysis:

During the 2010 update cycle, an emphasis has been placed on the use of GIS and HAZUS to assist jurisdictions conduct a more viable risk assessment and enable more accurate modeling studies in Washington. In an effort to enhance this initiative, the Washington State Military Department Emergency Management Division (EMD) initiated the Washington State HAZUS-MH (Multi Hazard) Database Enhancement Project which was subcontracted to the Washington State Department of Natural Resources (WA-DNR), Division of Geology and Earth Resources (DGER), and funded through a HMGP grant. The data gathered during this project has enhanced information which jurisdictions can utilize during their risk assessment rather than relying on the HAZUS-MH default data. As an example, Figure 1 below demonstrates the variables in data for medical facilities:

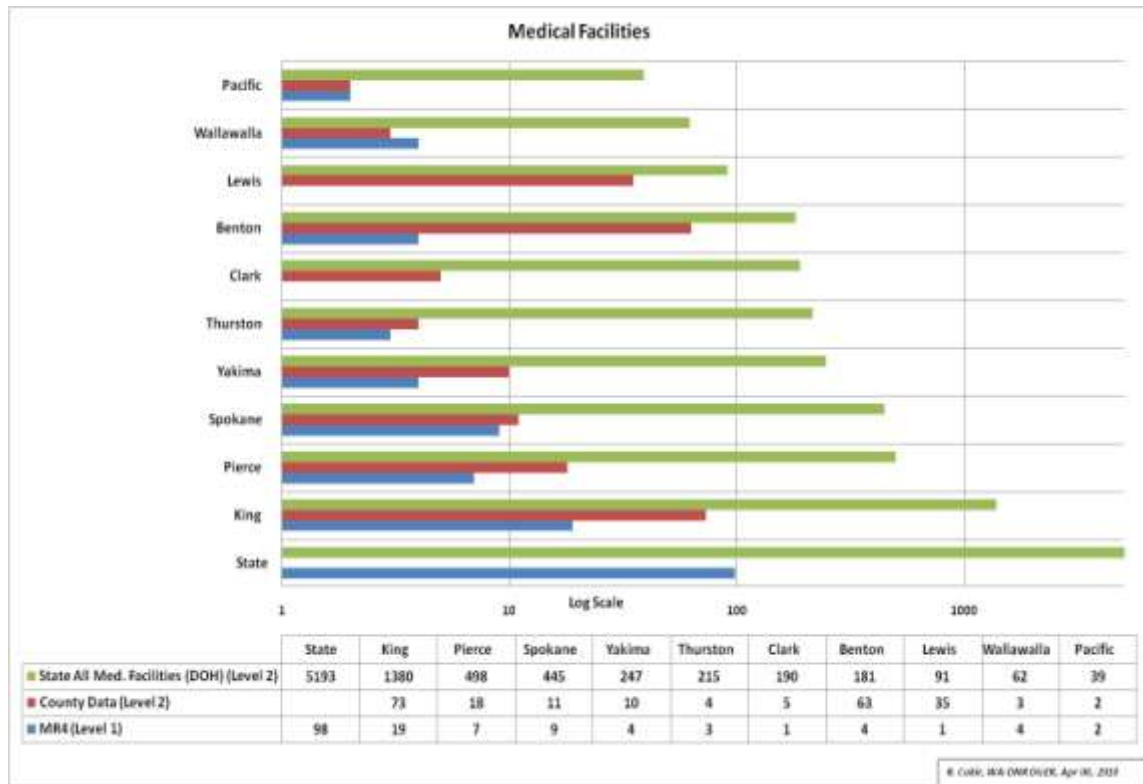


Figure 1. Medical facilities showing significant improvement after using the statewide DOH data.

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A more detailed accounting of the project scope can be found in Tab 11, *Best Practice Section* of the SHMP.

In addition to the above, several other useful datasets were provided to local jurisdictions to advance their use of HAZUS-MH modeling throughout Washington. These datasets include: a soils and liquefaction hazard maps database and a database of USGS ShakeMaps Scenarios for Washington State for HAZUS earthquake modeling, among others. These datasets are openly available to the public for use in HAZUS modeling and can be accessed/downloaded via the WAHUG website at: <http://www.usehazus.com/wahug>.

### WAHUG Users Group:

During the 2007-2010 plan update cycle, the Washington HAZUS User's Group (WAHUG) was reinitiated in late 2008. Due to response to the initiative statewide, the HAZUS Technical Lead for the Washington Military Department was recognized by FEMA as the *HAZUS User for the Year*. A more detailed description of the User's Group can be found in Tab 11, *Best Practices* and Tab 12, *Best Available Science* sections of the SHMP.

In an effort to make the User's Group more effective, and to enhance risk analysis statewide, the State took the lead in providing on-site technical assistance for both GIS and HAZUS to GIS and Emergency Management staff statewide as needed. This technical assistance included general software installation and hands-on instruction for the flood and earthquake models for mitigation planning activities, as well as instruction and assistance understanding the HAZUS reports.

### Mitigation Planning User's Group:

During the 2007-2010 plan update cycle, the State Hazard Mitigation Strategist created a Mitigation Planning User's Group, which included representatives from the State, local jurisdictions, private industry and the Washington State Emergency Management Association (WASEMA). The purpose of this group was to establish a mechanism by which issues and difficulties that the local jurisdictions were experiencing could be discussed by those immediately involved in local mitigation planning in an effort to come up with solutions. Many of the individuals who serve as members of the steering committee of the User's Group have experienced the same difficulties. This User's Group also assisted in providing two technical assistance workshops on a trial-run basis to determine their level of effectiveness.

During these workshops, a group of 8 planners (both public and private industry) with a sound working knowledge of mitigation planning, the State's Mitigation Strategist and two FEMA Region X planners provided technical assistance to approximately 30 jurisdictions.

If possible, members of the User's Group were paired with jurisdictions from like-regions so their experience with similar hazards would be beneficial in providing guidance.

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Also, by placing the planners in the same geographic regions, it made it easier for the planners and User's Group members to contact one another for any follow-up meetings. Members from both the User's Group and the local jurisdictions who attended the workshops voiced very positive feedback with respect to continuing this type of training. It is anticipated that the State, FEMA and the Users Group will continue to conduct these sessions on a quarterly basis during the next plan update cycle.

### **GRANT AWARDS:**

During the time period from April 2007 through December 2009, the Mitigation and Recovery Section provided approximately \$2.8 million to help with local plan development in 36 jurisdictions. The Mitigation and Recovery Section provided approximately \$3.9 million to help with local plan development since the publication of new federal hazard mitigation planning requirements in February 2002 through March 2007. Funding was provided through the HMGP, PDM and FMA. The state provided half of the non-federal match for HMGP-funded hazard mitigation plans. During the 19 month period of time (May 2007 through December 2009), significantly more funds were awarded during that period when compared to the 5 previous years (60 months), during which time \$3.9 million was awarded. This again demonstrates the progressive approach state jurisdictions are taking to continue enhancing their hazard mitigation plan. The tables on the following pages of this section show the planning efforts as a whole, and those being funded by FEMA Hazard Mitigation Assistance Grants.

### Technical Assistance for Grants:

During the HMGP application periods for DRs 1734, 1817, and 1825, the Mitigation and Recovery Section staff provided significant technical assistance to local jurisdictions and tribes for both planning and project application development. The staff provided any assistance requested by the subapplicants in order to complete a successful application. This is demonstrated by the fact that all planning applications submitted under those HMGP's were ultimately sent to FEMA and approved for funding. The below chart details various grant activities during the 2005-2009 timeframe.

Additionally, the Mitigation and Recovery Section staff hired a Benefit-Cost Analysis (BCA) contractor to review all BCAs submitted with the HMGP project applications for DRs 1817 and 1825. If the reviews found errors in the BCAs, the staff worked with the local jurisdictions to correct the errors and ultimately complete an accurate BCA. As of the date of this plan, FEMA has not found any of the BCAs in the HMGP applications for DRs 1817 and 1825 to be in error.

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| Jurisdiction       | HMGP-1641/<br>1671/1682 | PDM 05/06   | HMGP-1734   | PDM/FMA<br>07/08/09 | HMGP-1817   | Total Funding | Flooding | Earthquake | Other<br>Hazards | Acquisition | Elevation | Seismic<br>Retrofit | Other Project<br>Types | Total Projects |
|--------------------|-------------------------|-------------|-------------|---------------------|-------------|---------------|----------|------------|------------------|-------------|-----------|---------------------|------------------------|----------------|
| Washington State   | \$949,039               |             |             | \$828,317           |             | \$1,777,356   |          | X          |                  |             |           | 2                   |                        | 2              |
| Clark              |                         | \$368,066   |             |                     |             | \$368,066     | X        |            |                  |             |           |                     | 1                      | 1              |
| City of Kalama     |                         | \$340,000   |             |                     |             | \$340,000     | X        |            |                  |             |           |                     | 1                      | 1              |
| Grays Harbor       |                         |             | \$82,500    |                     |             | \$82,500      | X        |            |                  |             | 1         |                     |                        | 1              |
| Port Townsend      | \$858,591               |             | \$878,186   | \$1,026,415         |             | \$2,763,192   |          | X          |                  |             |           | 4                   |                        | 4              |
| King               | \$2,551,581             | \$1,616,130 | \$2,519,800 | \$1,063,265         | \$2,065,622 | \$9,816,398   | X        |            |                  | 5           | 5         |                     | 1                      | 11             |
| Issaquah           |                         | \$522,210   |             |                     | \$888,455   | \$1,410,665   | X        |            |                  |             | 1         |                     | 1                      | 2              |
| Renton             |                         |             |             | \$479,279           |             | \$479,279     |          | X          |                  |             |           | 1                   |                        | 1              |
| Seattle            | \$1,980,000             | \$713,229   |             |                     |             | \$2,693,229   |          | X          |                  |             |           | 4                   |                        | 4              |
| Snoqualmie         | \$1,618,586             |             | \$951,264   |                     | \$1,441,605 | \$4,011,455   | X        |            |                  |             | 4         |                     |                        | 4              |
| West Sound UD      | \$234,300               |             |             |                     |             | \$234,300     |          | X          |                  |             |           | 1                   |                        | 1              |
| Centralia          |                         |             | \$1,894,706 |                     | \$485,307   | \$2,380,013   | X        |            |                  | 1           | 1         |                     |                        | 2              |
| Chehalis, City of  |                         |             | \$674,791   |                     |             | \$674,791     | X        |            |                  | 1           |           |                     |                        | 1              |
| Chehalis Tribe     |                         |             | \$286,236   |                     |             | \$286,236     | X        |            |                  | 1           | 1         |                     |                        | 2              |
| Pierce             | \$3,794,149             |             | \$396,442   | \$554,008           | \$1,215,523 | \$5,960,122   | X        |            |                  | 7           |           |                     |                        | 7              |
| Bethel SD          |                         |             | \$555,172   |                     |             | \$555,172     |          | X          |                  |             |           | 1                   |                        | 1              |
| Eatonville         |                         |             |             | \$452,500           |             | \$452,500     |          |            | X                |             |           |                     | 1                      | 1              |
| Pacific Lutheran U |                         |             | \$2,526,753 |                     |             | \$2,526,753   |          | X          |                  |             |           | 2                   |                        | 2              |
| Sumner             | \$616,600               |             |             |                     |             | \$616,600     | X        | X          |                  |             | 1         | 1                   |                        | 2              |
| Skagit             | \$147,500               |             | \$1,093,168 |                     | \$111,560   | \$1,352,228   | X        | X          | X                | 1           |           | 1                   | 1                      | 3              |



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| Jurisdiction         | HMGP-1641/<br>1671/1682 | PDM 05/06    | HMGP-1734    | PDM/FMA<br>07/08/09 | HMGP-1817   | Total Funding | Flooding | Earthquake | Other<br>Hazards | Acquisition | Elevation | Seismic<br>Retrofit | Other Project<br>Types | Total Projects |
|----------------------|-------------------------|--------------|--------------|---------------------|-------------|---------------|----------|------------|------------------|-------------|-----------|---------------------|------------------------|----------------|
| Anacortes            |                         | \$637,500    |              |                     |             | \$637,500     |          | X          |                  |             |           | 1                   |                        | 1              |
| Concrete             |                         |              |              |                     | \$776,503   | \$776,503     |          |            | X                | 1           |           |                     |                        | 1              |
| Hamilton             |                         |              |              | \$873,531           |             | \$873,531     | X        |            |                  | 1           |           |                     |                        | 1              |
| Snohomish            |                         |              |              | \$457,187           |             | \$457,187     | X        |            |                  |             | 1         |                     |                        | 1              |
| Edmonds              |                         | \$6,248,395  |              |                     |             | \$6,248,395   |          | X          |                  |             |           | 2                   |                        | 2              |
| Everett              |                         |              |              | \$1,495,909         |             | \$1,495,909   |          | X          |                  |             |           | 1                   |                        | 1              |
| City of<br>Snohomish | \$747,370               |              |              |                     |             | \$747,370     | X        |            |                  |             | 1         |                     |                        | 1              |
| Stillaguamish<br>FCD |                         | \$175,000    |              |                     |             | \$175,000     | X        |            |                  |             |           |                     | 1                      | 1              |
| Sultan               | \$278,400               |              |              |                     |             | \$278,400     | X        |            |                  | 1           |           |                     |                        | 1              |
| Thurston             |                         | \$1,508,325  |              |                     |             | \$1,508,325   | X        |            |                  |             |           |                     | 1                      | 1              |
| Evergreen<br>State   |                         |              | \$1,055,600  |                     | \$1,456,453 | \$2,512,053   |          | X          |                  |             |           | 2                   |                        | 2              |
| Whatcom              |                         |              |              |                     | \$450,490   | \$450,490     | X        |            |                  | 2           |           |                     |                        | 2              |
| Yakima               | \$160,000               |              |              |                     |             | \$160,000     | X        |            |                  |             |           |                     | 1                      | 1              |
| TOTALS               | \$13,936,116            | \$12,128,855 | \$12,914,618 | \$7,230,411         | \$8,891,518 | \$55,101,518  |          |            |                  | 21          | 16        | 26                  | 9                      | 69             |

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### Plan Status as of January 31, 2010:

As of January 31, 2010, there are 48 approved local and tribal hazard mitigation plans in Washington. While the number of overall plans is down from 2007, many of the individual plans during the 2007-2010 update cycle became regional or county-wide plans, and include many more jurisdictions and special purpose districts. These plans cover in excess of 412 local jurisdictions – cities, towns, counties, special districts such as schools, hospitals, fire, cemetery, water, sewer, dike and flood control districts, and a handful of private, non-profit organizations. In addition, plans currently under development (expired jurisdictions going through the update process or in review) cover an additional 100 jurisdictions, and 6 new county plans are currently under development which will include an estimated 75 jurisdictions. Once all of these plans are completed (the majority within the next 6 months) less than 40,000 residents will not be covered by a mitigation plan, with only Adams and Klickitat Counties without plans. All remaining counties will have plans in place, covering 99.43 percent of the state's population. See table below for a general timeline on when plans have been developed.

| Approved Local Hazard Mitigation Plans – 48 as of January 31, 2010                                    |               |      |       |       |       |       |         |
|---|---------------|------|-------|-------|-------|-------|---------|
|   | Approval Year |      |       |       |       |       |         |
|   | 2002          | 2003 | 2004  | 2005  | 2006  | 2007  | 2010    |
| Estimated Percentage of State Population Covered by Local Hazard Mitigation Plan                      | 0%            | 6.5% | 47.0% | 73.1% | 77.1% | 89.9% | 99.43%  |
| Percent of State Goal (85% of Population)   | 0%            | 7.6% | 55.3% | 86.0% | 90.8% | 106%  | 116.98% |
| State Population: 6,375,600 (April 2006 OFM Estimate); 2010 numbers are projections through year-end. |               |      |       |       |       |       |         |

During the time period April 2007 to January 31, 2010, 26 new plans, covering 135 jurisdictions were added. These include:

- 3 Regional Plans
- 8 County plans
- 5 City Plans
- 1 University
- 6 Tribal Plans
- 3 Large Special Purpose Districts

Currently, as indicated on the map below, as of January 31, 2010, there are:

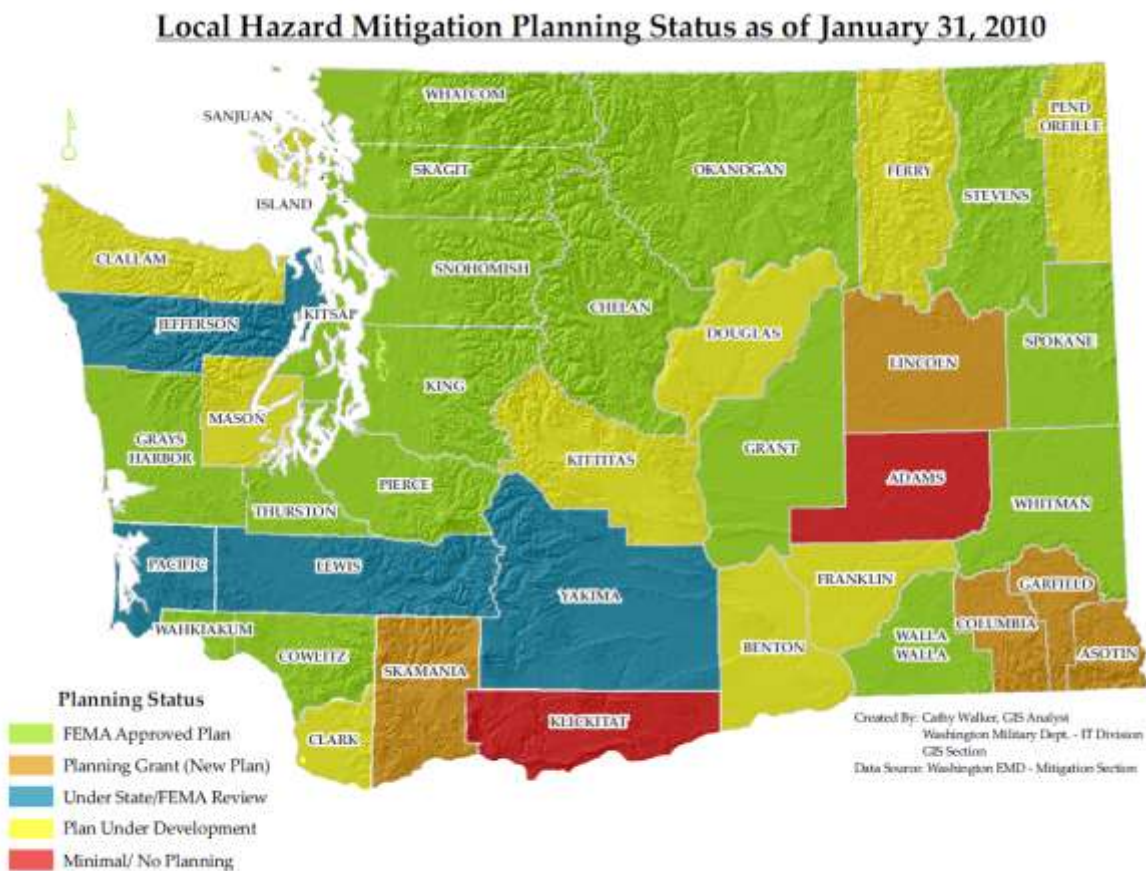
- 3 Regional plans
- 18 Countywide approved plans
- 13 Countywide plans in the update process
- 8 Tribal plans in place
- 7 Tribal plans under development
- 8 City plans in place
- 5 new local plans under development
- 1 county plan which expired several years ago now in the planning process

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- 4 plans are under FEMA review (or being revised by their communities based on first review);
- 3 county plans have undergone at least one state review but require changes (considered to still be in the planning process indicated in yellow).
- 2 jurisdictions do not intend to develop a mitigation plan.

Note: Some of the plans are listed in more than one category above as they may be current but in the update process.

The map below depicts the status of local hazard mitigation planning initiatives. This map has changed significantly since the 2004-2007 map. Review demonstrates the fact that the state has entered its first phase of plan updates. Comparison with the 2007 map also demonstrates the increased number of new plans.



Not noted within these calculations are the various city and special purpose district plans currently under development. These are jurisdictions which have elected to not become part of a county or regional plan, and are undertaking the planning process independently. There are currently an estimated 25 plans of this type under development.

The following provides a snapshot view of anticipated plans which will be developed or updated during the 2010-2013 plan cycle. Note: all the tribal planning efforts are in progress.

## Coordination of Local Mitigation Planning

### County Plans Summary of Timelines

Note: Gray area indicates plan expiration date within that time period

| Jurisdiction                 | Funding Source | Jan-Mar 10 | Apr-Jun 10 | Jul-Sep 10 | Oct-Dec 10 | Jan-Jun 11 | Jul-Dec 11 | Jan-Dec 12 | Jan-Jun 13 |
|------------------------------|----------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Kittitas County - New        | HMGP-1817      |            |            |            |            |            |            |            |            |
| Lincoln County - New         | HMGP-1817      |            |            |            |            |            |            |            |            |
| Pacific County - New         | PDM            |            |            |            |            |            |            |            |            |
| Pierce County Phase 2 - New  | HMGP-1734      |            |            |            |            |            |            |            |            |
| Pierce County Phase 3 - New  | HMGP-1734      |            |            |            |            |            |            |            |            |
| Skamania County - New        | PDM            |            |            |            |            |            |            |            |            |
| Benton County                | HMGP-1682      |            |            |            |            |            |            |            |            |
| Chelan County                | HMGP-1817      |            |            |            |            |            |            |            |            |
| Clallam County               | Local          |            |            |            |            |            |            |            |            |
| Clark County                 | Local          |            |            |            |            |            |            |            |            |
| Cowlitz County               | HMGP-1734      |            |            |            |            |            |            |            |            |
| Douglas County               | HMGP-1734      |            |            |            |            |            |            |            |            |
| Ferry County                 | Local          |            |            |            |            |            |            |            |            |
| Franklin County              | Local          |            |            |            |            |            |            |            |            |
| Jefferson County             | HMGP-1734      |            |            |            |            |            |            |            |            |
| Kitsap County                | Local          |            |            |            |            |            |            |            |            |
| Lewis County                 | Local          |            |            |            |            |            |            |            |            |
| Mason County                 | HMGP-1817      |            |            |            |            |            |            |            |            |
| N King and S Snohomish Cntys | Local          |            |            |            |            |            |            |            |            |
| Pend Oreille County          | HMGP-1734      |            |            |            |            |            |            |            |            |
| Yakima County                | Local          |            |            |            |            |            |            |            |            |
| Snohomish County             | PDM            |            |            |            |            |            |            |            |            |
| Walla Walla County           | HMGP-1734      |            |            |            |            |            |            |            |            |
| Whatcom County               | Local          |            |            |            |            |            |            |            |            |
| Grays Harbor County          | HMGP-1734      |            |            |            |            |            |            |            |            |
| Whitman County               | HMGP-1817      |            |            |            |            |            |            |            |            |
| Grant County                 | HMGP-1817      |            |            |            |            |            |            |            |            |
| Spokane County               | Local          |            |            |            |            |            |            |            |            |
| Island County                | Local          |            |            |            |            |            |            |            |            |

#### Status of Planning Efforts

In FEMA Review
  In State Review
  In Progress

## Coordination of Local Mitigation Planning

### Tribal Plans Summary of Timelines

Note: Gray area indicates plan expiration date within that time period

| Jurisdiction                   | Funding Source | Jan-Mar 10 | Apr-Jun 10 | Jul-Sep 10 | Oct-Dec 10 | Jan-Jun 11 | Jul-Dec 11 | Jan-Dec 12 | Jan-Jun 13 |
|--------------------------------|----------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Hoh Tribe - <b>New</b>         | HMGP-1671      |            |            |            |            |            |            |            |            |
| Lower Elwha Tribe - <b>New</b> | HMGP-1682      |            |            |            |            |            |            |            |            |
| Makah Tribe - <b>New</b>       | HMGP-1734      |            |            |            |            |            |            |            |            |
| Nooksack Tribe - <b>New</b>    | HMGP-1682      |            |            |            |            |            |            |            |            |
| Quinault Tribe - <b>New</b>    | HMGP-1734      |            |            |            |            |            |            |            |            |
| Snoqualmie Tribe - <b>New</b>  | HMGP-1734      |            |            |            |            |            |            |            |            |
| Jamestown S'Klallam Tribe      | HMGP-1734      |            |            |            |            |            |            |            |            |
| Kalispel Tribe                 | Local          |            |            |            |            |            |            |            |            |
| Squaxin Island Tribe           | Local          |            |            |            |            |            |            |            |            |
| Suquamish Tribe                | Local          |            |            |            |            |            |            |            |            |
| Tulalip Tribe                  | Local          |            |            |            |            |            |            |            |            |
| Lummi Tribe                    | Local          |            |            |            |            |            |            |            |            |
| Sauk-Suiattle Tribe            | Local          |            |            |            |            |            |            |            |            |

## **Coordination of Local Mitigation Planning**

Significant to the 2007-2010 planning events this year included the potential lapse of the King County Regional Plan during the height of the County's flood season. King County is the state's most heavily populated county. Due to issues involving the Howard Hanson Dam (potential dam failure), the County was required to expend an excessive amount of time planning for potential dam failure, which did not allow for the update of their expiring mitigation plan. Because of this, the User's Group mentioned above held their first technical assistance workshop, providing technical assistance to approximately 20 jurisdictions within the County during the one-day workshop.

## Coordination of Local Mitigation Planning

### Historical Data 2004 – 2007:

The State EMD continued to provide support to local planning initiatives during this period. As planning efforts matured and initial plans completed in many communities, and Mitigation and Recovery Section staffing evolved in the years following the 2001 Nisqually Earthquake Disaster, section staff moved from primarily providing funding, information and training to assisting with plan development and review. This effort included technical assistance on-site as well as via phone and written correspondence, meeting with local planning teams to assist with issue resolution and mitigation strategy development, and reviewing plan drafts and providing comments and suggestions to help local plans become approvable by FEMA.

The level of assistance requested and provided by Mitigation and Recovery Section staff has varied by community and the level of experience and knowledge of local staff as well as by complexity of issues and numbers of jurisdictions involved in a particular plan. Currently, the State Hazard Mitigation Programs Manager provides such assistance.

The Mitigation and Recovery Section provided approximately \$3.9 million to help with local plan development since the publication of new federal hazard mitigation planning requirements in February 2002. Funding was provided through the HMGP, PDM and FMA. The state provided half of the non-federal match for HMGP-funded hazard mitigation plans.

Since the July 1, 2004 approval of the SHMP, more than \$1.5 million has been provided to eight communities and Washington State University to develop new plans, as well as to Pierce County for expanding its plan into a multi-jurisdiction plan.

As of April 2007, there are 62 approved local and tribal hazard mitigation plans in Washington. These plans cover about 500 local jurisdictions – cities, towns, counties, special districts such as schools, hospitals, fire, water, sewer, and flood control districts, and a handful of private, non-profit organizations. The plans cover nearly 90 percent of the state's population. See table below for a general timeline by year on how plans have developed.

**Approved Local Hazard Mitigation Plans – 62 as of April 2007**

|  | Approval Year |      |       |       |       |       |
|--|---------------|------|-------|-------|-------|-------|
|  | 2002          | 2003 | 2004  | 2005  | 2006  | 2007  |
| Estimated Percentage of State Population Covered by Local Hazard Mitigation Plan | 0%            | 6.5% | 47.0% | 73.1% | 77.1% | 89.9% |
| Percent of State Goal (85% of Population)  | 0%            | 7.6% | 55.3% | 86.0% | 90.8% | 106%  |

State Population: 6,375,600 (April 2006 OFM Estimate); 2007 numbers are projections through year-end.



## Coordination of Local Mitigation Planning

Additionally, there are three local plans under development, and seven either under state or FEMA review or being revised by their communities.

Below is a map depicting the status of local hazard mitigation planning initiatives. Note that this map is similar to the one above, which shows the status of planning efforts three years ago. Generally, most communities and counties that had active planning efforts underway at that time now have approved plans.

- 62 local plans in 25 counties have been approved by FEMA (counties in green).
- 4 county plans have been submitted for review by the state and or FEMA (counties in purple).
- 2 counties have planning initiatives underway (counties in yellow).
- 8 counties have minimal to no planning efforts underway (counties in red).

**Local Hazard Mitigation Planning Status as of April 2007**



Although a large number of jurisdictions are covered under local and state hazard mitigation plans, the status of hazard mitigation planning in Washington remains quite active. Several counties with approved multi-jurisdiction plans continue to add jurisdictions to their plans, while three jurisdictions – City of Bellevue, Pacific County, and Stevens County – began new planning initiatives in late 2006 or early 2007.



## **Coordination of Local Mitigation Planning**

The Mitigation and Recovery Section of EMD continues to support cities, counties and tribes seeking grant assistance to help developing new plans or updating existing plans. For example:

- The City of Hoquiam is a finalist for funding under the 2007 PDM grant program to develop a hazard mitigation plan.
- Six Indian tribes, two cities and two counties submitted Letters of Intent to seek funding from DR-1671 and DR-1682 HMGP's to assist with new plan development, while one county and one state agency submitted Letters of Intent to seek funding for updating their plans. Most of the jurisdictions seeking funding for new plans are among those with the least resources to develop plans.
- One county applied for funding through the 2007 FMA to update the flood portions of its mitigation plan.

These planning communities requested more than \$1 million in grant funding for hazard mitigation planning initiatives.

By the end of 2008, a number of communities will be seeking re-approval of their plans as the five-year life of their initial plans comes to an end; these include the City of Seattle, Skagit County (multi-jurisdiction plan), and Thurston County (multi-jurisdiction plan). The number of local plans whose initial five-year life comes to an end will increase significantly in both 2009 and 2010.

The Mitigation and Recovery Section of EMD will continue providing support described previously to communities engaged in plan development as well as to those adding jurisdictions to their plans or revising plans for re-approval. The section's priorities regarding local mitigation planning during the next three years will be on:

- 1) Assisting communities developing new hazard mitigation plans.
- 2) Continuing to reach out to jurisdictions including Indian Tribes without mitigation plans (see red counties on map, page 5).
- 3) Helping communities revise or expand existing plans.

### ***Historical Data 2002 to 2004:***

From February 2002 (the date of publication of hazard mitigation planning regulations in 44 CFR 201) through 2004, the Mitigation and Recovery Section of the State EMD provided extensive support, guidance, and information to local jurisdictions preparing local hazard mitigation plans. Among the assistance provided includes:

- Meeting with local jurisdictions to review hazard mitigation planning requirements and to provide training on plan development.
- Providing technical assistance including reviewing draft plans, identifying sources of information, and distributing regional hazard and socioeconomic information as well as examples of approved plans.

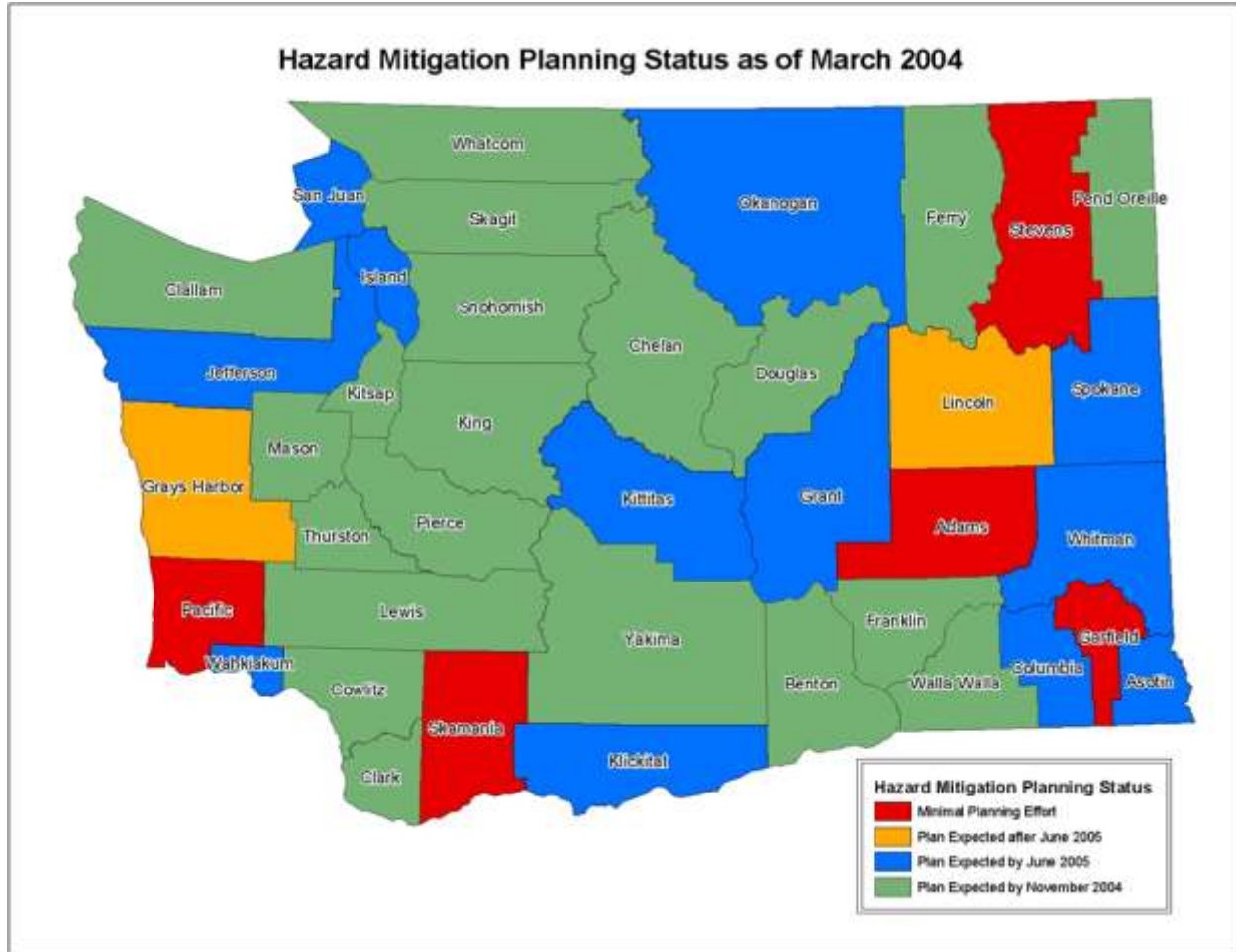
## **Coordination of Local Mitigation Planning**

- Providing planning grants through the Hazard Mitigation Grant Program (HMGP), Pre-Disaster Mitigation Program (PDM), and Flood Management Assistance program (FMA).
- Hosting a pilot risk assessment course sponsored by FEMA.
- Providing software designed to help local jurisdictions prepare their plans.
- Connecting local jurisdictions with state agencies with information useful for hazard mitigation planning.
- Developing and distributing a “lessons learned and successes” document based on the efforts of early local jurisdiction planning efforts, as well as a newsletter with the latest information, guidance and suggestions related to hazard mitigation planning.
- Providing information and assistance in map development through Geographic Information System software, and instruction in FEMA’s Hazards United States (HAZUS) loss-estimation program.

Extensive detail on this work is provided in the 2004 edition of the State Hazard Mitigation Plan (SHMP).

Due in part to the extent of assistance provided by the state, a significant number of local jurisdictions had begun planning initiatives under the requirements of 44 CFR 201.6, Local Hazard Mitigation Plans, as work on the 2004 edition of the SHMP was wrapping up. At this point, 34 of the state’s 39 counties – 87 percent – had initiated mitigation planning at some level of effort. The map below depicts the status of local hazard mitigation planning in the state as of March 2004.

## Coordination of Local Mitigation Planning



- 20 counties were expected to complete hazard mitigation plans by the end of November 2004 (counties in green). These counties represented about 71 percent of the state's population.
- 12 counties were expected to complete hazard mitigation plans by the end of June 2005 (counties in blue).
- 2 counties were expected to complete hazard mitigation plans sometime after June 2005 (counties in yellow).
- 5 counties had minimal or no planning efforts either ongoing or planned (counties in red).

## Coordination of Local Mitigation Planning

### II. Local Plan Integration

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**Requirement 44 CFR §201.4(c)(4)(ii): *Plan Content.*** To be effective the plan must include a section on the *Coordination of Local Mitigation Planning* that includes a description of the State process and timeframe by which the local plans will be reviewed, coordinated, and linked to the State Mitigation Plan.

#### *Reviewing Local Plans – General Information*

The goal of the Mitigation and Recovery Section of EMD is to work with communities developing hazard mitigation plans so that their plans are as close as possible to pre-adoption approval once they are submitted to FEMA Region X. Section staff reviews local plans according to the following process:

- Section staff works to review a local plan within 30 days of its submission to the state. (*Note: This time frame is a goal that depends upon other urgent state emergency response or disaster recovery activities going on at the time of submission, or other urgent hazard mitigation programmatic issues.*) The plans are evaluated against the local plan review crosswalk; the crosswalk will be completed with comments and suggestions for improvement if any element of the plan is found to be not satisfactory or not in compliance with federal plan guidance. When the review is complete, a copy of the completed plan review crosswalk is returned to the community.
- As requested, Mitigation and Recovery Section staff will discuss and / or meet with community planners to give the findings of the review along with suggestions for necessary revisions.
- Mitigation and Recovery Section staff will continue to review the plan and work with the community until the staff believes the local plan meets FEMA's planning requirements. At this point, the staff forwards to FEMA Region X's mitigation planning staff a copy of the local plan and plan review crosswalk along with its recommendation for pre-adoption approval.
- If FEMA's review of the plan indicates any inadequacies in the submitted local plan, the EMD Mitigation and Recovery Section staff will continue working and coordinating with the community until its plans receives pre-adoption approval.
- Once plans receive FEMA's approval, the Mitigation and Recovery Section staff forwards approval letters to the community.

Beginning in the fall of 2007, the State Hazard Mitigation Strategist provided assistance as necessary to ensure reviews were completed on a timely basis. This was a change in procedure resulting from a lesson learned after personnel changes, implementation of HMGP following two back-to-back disaster declarations (November 2006 flood and December 2006 windstorm), and processing of applications for PDM and FMA left the Mitigation and Recovery Section understaffed to review local plans in a timely manner in

## Coordination of Local Mitigation Planning

the December 2006 – June 2007 period. A new State Hazard Mitigation Programs Manager was appointed and a new State Hazard Mitigation Strategist was on staff as of September 2007. However, in March 2008 the Strategist left and a new State Hazard Mitigation Strategist was appointed in August 2008. From that point forward, the State Hazard Mitigation Strategist again assumed the responsibility of local plan review through the time period included in this plan update cycle.

### New Planning Initiatives beginning 2007-2010:

During the 2007-2010 timeframe, the State Hazard Mitigation Strategist made some slight modifications to the process to enhance the success of plan review to FEMA. One of the most significant of these changes involved the Crosswalk.

Beginning September 2009, all plans submitted to the State for review were required to have a completed Crosswalk accompanying them. Once this requirement took effect, the plans were in much better condition for review than previously, as jurisdictions were able to see what they were missing within the plan prior to its submission.

When possible, as jurisdictions were completing their plan, the Mitigation Strategist would review the document as a work in progress to make certain the jurisdiction was on target, rather than waiting for the completion of the entire review process and then discovering that errors had occurred. This became significant when some jurisdictions were missing the public input process and were waiting until the plan was complete before they sought their first public involvement. The jurisdictions understood this was an informal, cursory review, but were nonetheless eager to make certain they were on the right path of plan development. The effectiveness of this process became very evident when Thurston County submitted a regional plan which included 26 jurisdictions, and the plan passed through both State and FEMA review without any modifications being required. The principal planner had never completed a mitigation plan (in fact, had no emergency management experience) and worked for a regional planning council (land use).

Washington State is very fortunate to have many very well written plans, which local jurisdictions can utilize as templates when developing their plans. A few of these include: Skagit, Pierce and Thurston Counties. All of these plans vary greatly in nature, and represent different, successful planning techniques which can be useful examples for review when attempting to determine the type of plan to develop.

When plans are submitted for final review, crosswalks are completed by both the State and FEMA Region X planners. Both the State and Region X provide recommendations and examples to assist the jurisdiction in meeting the various planning requirements in which deficiencies are noted. Rather than merely returning the crosswalk to the jurisdiction, this practice allows the jurisdiction to have a better understanding of what is needed, and how they can meet the various requirements. This, again, has been effective in that most plans are able to gain successful submission during the second review process.

## Coordination of Local Mitigation Planning

### *Coordinating and Linking Local Plans with the State Plan*

During the 2007-2010 timeframe, review of plans submitted determined that the goals and objectives of these local plans and the goals and objectives of this state plan closely tracked with one another. Also, the review indicated that local jurisdictions evaluated hazards and risks in a similar manner and came to similar conclusions as those found within the SHMP. However, one significant area of change from the previous plans to those reviewed during the 2007-2010 cycle has been in the plan content.

While the previous plan editions were broad in nature, strategies, goals and objectives have become more focused. The reasoning for this is felt to be attributed to the fact that during the first plan cycle, locals were unsure as to what the FEMA requirements were, and therefore were being overly broad, as well as all encompassing rather than succinct and more to the point. During the 2007-2010 timeframe, it has become apparent that the local jurisdictions, when developing their plans, have realized the benefit of hazard mitigation planning beyond the plan merely being an avenue to grant funds, but for its actual intended purpose: to make a jurisdiction more resilient to hazards. Strategies have become more specific rather than overly broad; more project-oriented rather than process oriented. Many of the strategies developed during this cycle have also included engineer-completed Benefit-Cost Analysis, which demonstrates the level of efficiency and energy which the locals are incorporating into their plan development. A snapshot of a few strategies from more recent plans is depicted in the table below. This is a new element within the 2010 plan.

## Coordination of Local Mitigation Planning

| Agency  | Mitigation Strategy  | Goal Addressed  | Objective  | Hazard |
|---|--|---|--|--------|
| EQ - Earthquake F - Flood T - Tsunami WS - Windstorm WF - Wildfire V - Volcano I - Ice Storm D - Drought LS - Landslide MH - Multi hazard |  |   |  |        |
| Thurston County   | Pursue seismic upgrades to water facilities that do not meet current seismic codes.  | The local infrastructure of communities in the Thurston region is not significantly affected by a disaster from a natural hazard. | Minimize essential water and sewer service disruptions during disaster.    | EQ     |
|   | Retrofit the City's alarm system for wastewater lift station facilities and convert from analog technology to modern digital components.   | The local infrastructure of communities in the Thurston region is not significantly affected by a disaster from a natural hazard. | Minimize essential water and sewer service disruptions during disaster.    | MH     |
|   | Evaluate the flood prone area of Rainier Road SE near the BNSF railroad trestle and determine solutions to prevent future flooding events. | The local infrastructure of communities in the Thurston region is not significantly affected by a disaster from a natural hazard. | Minimize transportation facilities and systems disruption during disaster. | F      |
| Bethel School District  | Seismic upgrades to multiple school buildings.   | Protect Life and Property, Continuity of Operations   |  | EQ     |
|   | Water tower replacement  | Protect Life and Property   |  | EQ     |
| Mason County * Strategies included. Plan under FEMA review.   | Construct new Emergency Operations Center  | Protect Life and Property, Reduce Impacts and Losses from Natural Disasters   | Minimize damage to vulnerable structures, infrastructure and utilities.    | EQ/WS  |
|   | Stabilize slope and divert slide debris from covering multiple roads within the county.  | Protect Life and Property, Reduce Impacts and Losses from Natural Disasters   | Reduce hazards created by failure of the structural environment.           | LS     |
|   | Elevate or bury Sewage Pump Station/Force Main   | Protect Life and Property, Reduce Impacts and Losses from Natural Disasters   | Ensure continued operation of critical facilities.                         | EQ/F   |
| Pierce County   | Seismically retrofit Pierce Co. Sheriff's Peninsula Detachment.  | Protect Life and Property   | Facilities management  | EQ     |

## Coordination of Local Mitigation Planning

|                      |   |   |  |      |
|----------------------|---|---|--|------|
| Lewis County         | Place setback levees to increase flood storage within the active channel area and to enhance in-channel sediment transport. | Protect Life and Property, Promote a Sustainable Economy, Protect the Environment | F  |      |
|                      | Construction of pedestrian bridge across Carbon River in Orting to allow quick and easy evacuation route from town.         | Protect life and Property, Increase Public Preparedness                           | V  |      |
|                      | Modification of bridges known as choke points for ice flow.   | Reduce the possibility of damage and losses due to ice jams.                      | I  |      |
|                      | Implement hillside and steep slope development regulations.   | Reduce the possibility of damage and losses due to earthquakes.                   | EQ   |      |
| Spokane County       | Study the potential for gray water irrigation.  |   | D  |      |
|                      | Create incentives to encourage stream bank protection using vegetation to reduce turbidity and floating debris.             |   | F  |      |
|                      | Conduct geological studies analysis using available data to determine areas of potential slides.                            |   | LS   |      |
| Shoalwater Bay Tribe | Expand protective berm along coastline.   | Protect people, property and the natural environment                              | Reduce human-caused Coastal Erosion and its effects. | WS/T |
|                      | Create new/expand existing culverts to allow better drainage of marshy areas surrounding critical tribal facilities.        | Ensure continuity of critical economic and public facilities and infrastructure.  | Support redundancy of critical government functions. | F    |



## Coordination of Local Mitigation Planning

|                 |   |   |  |
|-----------------|---|---|--|
| San Juan County | Extend all marine pier pilings ten feet above high tide line to prevent pier and vessel losses.                       | Reduce Flood Damage   | F/WS/T/MH  |
|                 | Conduct structural analysis of county dams and reservoirs.  | Reduce Earthquake Damage  | MH/EQ  |
| Tulalip Tribes  | Seismically retrofit and install back-up generators for Tribal Center, Kenny Moses Building and the Quil Ceda Casino. | Protect people, property and the natural environment, Ensure continuity of critical economic and public facilities and infrastructure | Retrofit or build to highest standards, critical facilities and infrastructure<br>EQ |
|                 | Buyout landslide, flood and tsunami prone properties at Priest Point and other coastal areas.                         | Protect people, property and the natural environment  | Purchase hazard-prone areas for conservation and risk reduction.<br>LS/T/F/EQ        |
|                 | Relocate homes located on the bluff at Hermosa Point.   | Protect people, property and the natural environment  | Buyout or relocate structures located in high-risk hazard areas.<br>EQ/LS            |
| City of Redmond | Restore natural drainage capacity and structure of streams and wetlands to address future changes in flow.            | Preserve and Enhance the Natural Environment  | Protect the future quality of life and environment<br>F                              |
|                 | Harden multi-modal connections between Downtown and Overlake to provide access to protected emergency centers.        | Reduce Isolation Resulting from Disruption to Lifelines and Infrastructure  | Mitigate against loss of transportation facilities.<br>MH                            |
|                 | Performing hydrologic and hydraulic analyses that factor in climate change scenarios as well as future land use.      | Increase Community Resiliency to Large-Scale Regional Events  | Mitigate impacts from incidents of shallow flooding.<br>F/MH                         |

## Coordination of Local Mitigation Planning

|                        |   |   |   |    |
|------------------------|---|---|---|----|
| <i>Grant County</i>    | Build additional access road over the Saddle Mountains in SW Grant County to allow access to isolated areas near Hanford Nuclear Reservation. | Reduce Property Damage                                      | Design and retrofit essential transportation facilities and systems to minimize potential disruption. | MH |
|                        | Retrofit essential communications centers to allow communications during disaster.  | Maintain essential services, facilities and infrastructure. | Ensure local emergency services facilities can withstand the impacts of disasters.                    | MH |
| <i>Okanogan County</i> | Continue Vegetation Management Plan which includes thinning and clearing brush and other high risk fuels from under and near power lines.     | Protect People and Structures                               | Infrastructure Enhancement  | WF |
|                        | Stabilize and restore stream bank and channels in watersheds.   | Protect People and Structures                               | Infrastructure Enhancement  | MH |
|                        | Replace existing undersized culverts in county.   | Protect People and Structures                               | Infrastructure Enhancement  | F  |

## **Coordination of Local Mitigation Planning**

During the recent PDM Grant Application process, both Snohomish County and the City of Snoqualmie included in their applications a funding request for elevation certificates. These certificates were used as they developed mitigation project applications.

Mitigation and Recovery Section staff reviewed 48 local plans since April 2007 through January 31, 2010, examining in great detail the plans' risk assessments, mitigation goals, and proposed mitigation actions. The review process during 2007-2010 again indicates that the number of approved local plans and the regional areas covered by those plans provides sufficient information to supplement and improve the accuracy and depth of portions of the 2010 edition of the SHMP. Elements of local plans incorporated into the State's plan include:

- Locations of hazard areas identified by the local jurisdiction.
- Information on populations and structures located in or near local hazard areas/critical areas.
- Information on projected growth in or near identified local hazard areas/critical areas.
- Identifying mitigation goals and strategies that require state attention through inclusion in the state plan.

Review of the local plans revealed that many local plans were built on the foundation provided by the state plan, which had been completed and approved prior to drafting of many of the local plans reviewed during this 2010 update edition.

### Analysis of Local Plan Risk Assessments

Each of the local plans' risk assessments were reviewed for specific local information that would improve the SHMP's assessment of vulnerability, as well as determination of which jurisdictions were at greatest risk from the nine natural hazards addressed in the plan.

The following observations come from the review of the local plans' risk assessments:

- Much of the information contained in the local risk assessments that describe hazards and vulnerability mirrors that which appears in the SHMP, though in much less detail. Many local plans used and attributed information from the SHMP's risk assessment, or used information from the same sources. This likely resulted from the Mitigation and Recovery Section distributing draft hazard profiles to more than 40 communities during a FEMA-sponsored risk assessment workshop in the spring of 2003 and through the mail upon request, as well as making completed profiles available through the division's web site. While this is an excellent source of information, it also has drawbacks, as jurisdictions are not necessarily reviewing the hazard profiles at jurisdiction-specific level, but rather statewide. During the 2007-2010 plan update cycle, the State Mitigation Strategist and FEMA Region X attempted to dissuade jurisdictions from copying

## Coordination of Local Mitigation Planning

language verbatim, and instead focus on hazards which impact their region. For example, jurisdictions customarily will copy and paste the entire flood hazard profile from either the State's plan, or another local jurisdiction's plan into their hazard profile. Unfortunately, not all types of floods listed within a profile may impact the jurisdiction, e.g., riverine flooding may impact one jurisdiction, but not another, yet riverine flooding is contained within their hazard profile. Similar analysis can be seen when reviewing the Severe Storm hazard profile.

- Local plans in general did not appear to take advantage of information available from local planning departments regarding locations of frequently flooded areas, or other sources for the geologically hazardous areas. These are two of the five critical areas identified by state law. (All cities, towns, and counties must develop land-use regulations to protect and limit development within frequently flooded and geologically hazardous areas and frequently flooded areas pursuant to RCW 36.70A, Growth Management Act.). This is one of the reasons why in this plan edition, the state included a new *Best Available Science* section (Tab 12), to provide sources for jurisdictions to utilize.
- Local plans used a variety of methodologies to categorize or rate their vulnerability to hazards. Most rated hazards through a three-tier, *high – medium or moderate – low* vulnerability system. The hazards of greatest concern to local jurisdictions are: earthquake, flood, and severe storms. Hazards of medium or moderate concern are wildfire/urban fire and landslides/earth movement. Hazards of lesser concern are tsunami and volcanic eruption, primarily because their probability of occurrence is very low. Overall, the combined vulnerability rankings of the completed local plans is similar to the ratings made in the state's plan, which determined earthquake, flood, severe storm, and wildland fire to be the natural hazards of greatest concern.
- During the 2007 planning cycle, based on review of local plan risk assessments at that time, revisions to the 2007 SHMP risk assessment included revisions to the severe storm hazard profile to consider just two storm types – high winds and winter storms – as they were the storm types of greatest concern to local jurisdictions. This analysis remained consistent during the 2007-2010 update cycle, and the severe storm profile again focuses only on high winds and winter storms.
- While the 2007 plan recommended that the avalanche profile be dropped from the plan, during the 2010 update, it was determined that the profile should remain in the plan. This decision was based on the impact sustained following a series of storms occurring within a few weeks of each other, the first resulting in the December 2008 Flooding Declaration and the second resulting in the 2009 Severe Winter Storm Declaration. During those events, avalanches and floods caused a series of road closures within the state which lasted for 8 days. The recap below is an estimation of losses as determined by the Washington State Department of Transportation as a result of these closures.

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**Exhibit ES-1: Summary of Statewide Freight-Related Economic Impacts from the 2007-2008 Closures of I-5 and I-90 (in \$ Millions)**

| Type of Economic Impact   | I-5 Closure | I-90 Closure | Total Impacts Due to Closures |
|---|-------------|--------------|-------------------------------|
| Total Lost Economic Output (\$ Million)                                     | \$47.07     | \$27.89      | \$74.96                       |
| Employment Loss<br>(Estimated Job Loss for One Year Following the Closures) | 290         | 170          | 460                           |
| State Tax Revenue Loss (\$ Million)   | \$2.39      | \$1.42       | \$3.81                        |
| Reduction in Personal Income (\$ Million)                                   | \$14.55     | \$8.60       | \$23.15                       |

Source: WSDOT Freight Systems Division IMPLAN Modelina, 2008

Available at: <http://www.wsdot.wa.gov/research/reports/fullreports/708.1.pdf>

Based on these losses, it was determined that a more progressive approach is needed to help mitigate the impacts of Avalanches on our state, and therefore, the profile is still included within the 2010 plan edition.

- With respect to the drought profile, the state currently has five counties in Eastern Washington that are developing plans for the first time. As the risk resulting from a drought more severely impacted jurisdictions in Eastern Washington, which have a large amount of agricultural/farming businesses, until such time as the new local plans are reviewed to determine their level of vulnerability to drought, the profile will remain in the State's plan. If, after review of the new plans, it is determined that drought carries a low vulnerability, the profile will be removed from the 2013 edition of the State's plan.
- Based on the 2010 review of the 48 local plan risk assessments, minor revisions to the 2010 SHMP risk assessment was necessary as the hazards remained current between the last planning cycle and this planning cycle. The exception to this was the inclusion by some local jurisdictions of technological hazards. In reviewing the larger, more complex plans, a few also ventured down the path of addressing the potential impacts of climate change. It is anticipated that the number of plans which will begin addressing these issues will increase over time during the next planning cycle. Therefore, the SHMP has included climate change in this plan update cycle to provide basic information for those local plans which will be incorporating climate change in their hazard profiles during their next plan update cycle, as well as three

## Coordination of Local Mitigation Planning

additional man-made/technological hazards: Dam Safety, Hazardous Materials and Public Health. More information on the *Analysis of Local Hazard Vulnerability* can be found in Tab 5, Appendix 1 of this plan.

### Analysis of Local Plans' Mitigation Goals

The examination of the 48 local hazard mitigation plans completed since 2007 demonstrated that the jurisdiction's mitigation goals in general aligned with the mitigation goals of the SHMP. The 2010 SHMP's five mitigation goals are:

- Protect Life
- Protect Property
- Promote a Sustainable Economy
- Protect the Environment
- Increased Public Preparedness for Disaster

To demonstrate the alignment, below are examples from five local plans of jurisdictions of various sizes from across the state: King, Pierce, Thurston, Skagit and Yakima Counties, all of which are regional and/or multi-jurisdictional plans. This is a new addition to the 2010 plan.

## Coordination of Local Mitigation Planning

|                | WA State  | King County                            | Pierce County  | Thurston County   | Skagit County   | Yakima County  |
|----------------|---|--|--|---|---|--|
| <b>Goal #1</b> | <b>Protect Life</b>                               | Protect Life and Property              | Protect Life and Property                                | All sectors of the community work together to create a disaster resistant community.  | Save lives and property   | Protect Life, Property and Public Welfare  |
| <b>Goal #2</b> | <b>Protect Property</b>                           | Support Emergency Services             | Ensure Continuity of Operations                          | Local and state government entities have the capabilities to develop, implement, and maintain effective natural hazards mitigation programs in Thurston region. | Reduce vulnerability to future hazards                          | Public Awareness   |
| <b>Goal #3</b> | <b>Promote a Sustainable Economy</b>              | Increase Public Awareness              | Establish and Strengthen Partnerships for Implementation | Communities in Thurston region will have the capacity to initiate and sustain emergency operations during and after a disaster.                                 | Facilitate post-disaster funding                                | Natural Systems - Watershed and land use planning  |
| <b>Goal #4</b> | <b>Protect the Environment</b>                    | Preserve Natural Systems and resources | Protect the Environment                                  | Local government operations are not significantly disrupted by disasters from natural hazards.  | Speed recovery  | Partnerships and Implementation – Strengthen coordination among public agencies, citizens, non-profit organizations, business, and industry. |
| <b>Goal #5</b> | <b>Increase Public Preparedness for Disasters</b> | Encourage Partnerships                 | Increase Public Preparedness for Disasters               | Reduce the vulnerability to natural hazards in order to protect life, health, safety and welfare of the community's residents and visitors.                     | Demonstrate commitment to improving community health and safety | Emergency Services – Ensure projects to protect critical facilities, services, and infrastructure.   |
| <b>Goal #6</b> |   | Enhance Planning Activities            | Promote a Sustainable Economy                            | Local governments will support natural hazards mitigation planning, and implement the mitigation initiatives for their jurisdiction.                            |   |  |
| <b>Goal #7</b> |   |  |  | Local infrastructure of communities in the Thurston region is not significantly affected by a disaster from a natural hazard.                                   |   |  |
| <b>Goal #8</b> |   |  |  | Residents understand the natural hazards of the Thurston region and are aware of ways to reduce their personal vulnerability to those hazards.                  |   |  |

## Coordination of Local Mitigation Planning

### Vulnerable populations, structures in hazard areas, and projected population growth

Local plan risk assessments also were reviewed to determine whether they included information on the population and built environment vulnerable to various natural hazards that could be used in the state's risk assessment. In the planning regulations [44 CFR 201.6.c.2.ii], inclusion of such information is considered optional for local jurisdictions. Of all plans reviewed during the time period from 2004 to January 31, 2010, only 17 plans included any projected loss estimates. When estimates were provided for a hazard such as a tsunami, for example, they did not follow any standardized format or methodology, making a compilation for inclusion into the SHMP problematic. Likewise, not all of the jurisdictions within a regional plan provided loss estimations; many times only the county itself included figures. Therefore, an overall vulnerability analysis utilizing information from local plans was not possible in the risk assessment of this plan. There were, however, a few plans which provided enough detail and description of their method of analysis that we were able to utilize their data to incorporate into the risk assessment. That information is captured within Tab 5, *Risk Assessment* portion of the SHMP.

The issue of critical facilities within the hazard areas has been a difficult aspect for many jurisdictions as they conduct their risk assessment. Relying solely upon the HAZUS default data without the use of an enhanced dataset has not been very reliable. While for most jurisdictions it is their *Best Available Science* and meets requirements, as jurisdictions have begun to review their losses, they have realized that it is, in fact, not as accurate as possible. Based on this, the state embarked upon the project to enhance the data sets for the locals' use in conducting their risk assessment. During the 2007-2010 update cycle, significant work was done to provide a more reliable dataset to the locals. This is the project described on page 5 of this section.

Additional information concerning the vulnerability of local jurisdictions can be viewed within Tab 5, Appendix 1 – *Analysis of Local Hazard Vulnerability*.



### III. Prioritizing Local Assistance

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**Requirement 44 CFR §201.4(c)(4)(iii): *Plan Content.*** To be effective the plan must include a section on the *Coordination of Local Mitigation Planning* that includes criteria for prioritizing communities and local jurisdictions that would receive planning and project grants under available funding programs, which should include:

- Consideration for communities with the highest risks.
- Repetitive loss properties.
- Most intense development pressures.

Further, that for non-planning grants, a principal criterion for prioritizing grants shall be the extent to which benefits are maximized according to a cost benefit review of proposed projects and their associated costs.

The process used by the State of Washington to review, evaluate and select projects for the various mitigation grant programs is based on years of public participation and supports the State's home-rule form of government. Home rule provides that government at the lowest-possible level is the one best prepared to make decisions that affect it the most – including those involving hazard mitigation projects.

Washington's concept is to support all local mitigation efforts. Typically, hazard mitigation funds following a disaster are available to all eligible agencies and organizations statewide for projects that reduce the risk of future damage, regardless of the hazard being addressed (i.e., funds available following an earthquake disaster can address problems presented by other hazards). Occasionally, when mitigation funds are limited, grants can be restricted to specific areas of the state or address specific hazards. This occurred following the October 2003 and the January 2006 flood and storm disasters, when construction grants were limited to projects designed to address repetitive flood losses within the counties declared as disaster areas. However, planning grants were available to eligible applicants statewide.

The State's Hazard Mitigation Program uses a competitive system to evaluate and recommend for funding only the most environmentally sound and cost-effective projects. Projects recommended for funding are those that best document their ability to reduce future impacts of natural disasters as well as demonstrate cost-effectiveness through a benefit-cost analysis.

Potential projects are evaluated using a weighted scoring process emphasizing protection of life and property, reduction of risk, and cost-effectiveness. EMD's Mitigation and Recovery Section staff clearly communicates and demonstrates the importance of cost-effective projects to potential grant applicants throughout the application process. For example, all applicant briefings and application materials state

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that the benefit-cost ratio must be greater than 1.0 for the project to be eligible for any FEMA funded Hazard Mitigation Assistance grant. Staff from the Mitigation and Recovery Section works with each potential grant applicant to ensure that proposed projects provide as great a public benefit as possible, with a minimum public benefit of at least one dollar for each dollar spent on the project.

Only projects with a minimum benefit-cost ratio of 1.0 receive further consideration by a review committee.

### *Evaluation of State's Approach to Prioritization*

Mitigation and Recovery Section staff in October and November of 2006 conducted public outreach to a wide range of hazard mitigation stakeholders as part of the effort to review and update the 2007 version of this plan. Four public outreach sessions were conducted around the state in October, and email surveys were sent to those invited to the outreach sessions but who did not attend; in all individuals from 45 public and private organizations participated in the outreach. The purpose of this outreach was to gather information on hazards of concern to stakeholders as well as to discuss mitigation strategies at a policy level rather than individually. This report in its entirety is available within Tab 13, Annex 1, *2006 State Hazard Mitigation Planning Outreach Report*.

During this outreach, participants were asked what the state's hazard mitigation priorities should be. Response was as follows, in no particular order:

- Focus strategies on life safety vs. specific hazards
- Focus on strategies that are multi-hazard in their approach
- Reduce the number of structures in hazard areas
- Mitigate schools, transportation and public services (e.g., water, sewer) infrastructure
- Help communities that lack resources with mitigation planning and initiatives
- Develop incentives and best practice examples (i.e., Firewise) to encourage local mitigation
- Public education
- Develop better / more understandable information on hazards

Additionally, outreach participants were asked how the state should use its limited mitigation dollars. Among the responses were these:

- Use limited funds for the greater good – do the most good for the most people and most vulnerable locations
- Allocate money to the highest risk, highest impact hazards
- Tie funding to growth management planning (critical areas regulations)
- Remove structures from high risk areas
- Focus on hazard retrofits to bridges, public services such as water and sewer, and public buildings.

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Based in part on the findings of this outreach and an examination of the prioritization process as described above, the Mitigation and Recovery Section staff reviewed the state's hazard mitigation programs and their administrative plan (entitled *Hazard Mitigation Grant Programs Administrative Guidelines and Procedures*). This review looked at two issues:

- 1) Whether the administrative plan needed revision to include the mitigation priorities identified in the public outreach. The review shows that many of the identified mitigation priorities already were included in state project criteria (focus on life safety, multi-hazard approach, removing structures from hazard zones, public awareness); see page 9 of the State's June 2009 Mitigation Grants Program Administrative Plan in Tab 8.
- 2) Whether the state needed to revise its priorities regarding which jurisdictions received mitigation funding for plans or projects. The state's philosophy and practice to date has been to evaluate and fund mitigation projects that best document their ability to reduce future impacts of natural disasters as well as demonstrate cost-effectiveness through a benefit-cost analysis. The review showed that the state's approach to prioritizing mitigation funding to be sound, in that most projects dealt with hazards of greatest concern – earthquake and flooding – and they typically were from areas at greatest risk to those hazards.

However, a number of jurisdictions need more state support. This was shown through the public outreach initiative, the program review, as well as an ongoing survey of jurisdictions that expressed intent to apply for the HMGP funds from the November 2006 flood disaster (FEMA-1671-DR-WA), but did not. Many of these jurisdictions are within high-risk counties, and they lack the human, financial or technical resources to complete hazard mitigation plans and/or project applications. Among these jurisdictions are many of the State's Native American Tribes.

Therefore, over the next three years, the Mitigation and Recovery Section placed priority on increasing assistance to local jurisdictions that lacked resources to develop hazard mitigation plans and project applications. Section staff accomplished this in a number of ways, such as increased on-site assistance, regular workshops to help jurisdictions develop applications and benefit-cost analyses, presentations at conferences, grants and other funding assistance, and ongoing communication through the EMD newsletter, email, and other means. The three Presidentially-declared disasters during that timeframe (DR-1734/1817/1825) did restrict the total amount of assistance provided to these jurisdictions as the management of the associated HMGP's took priority. And, these jurisdictions were especially hit hard by the severe economic downturn that occurred in 2009. In some cases, these jurisdictions laid off the staff most familiar and involved in their hazard mitigation activities. Therefore, the personnel to which those duties fell were basically starting from scratch in learning about how to execute these programs. During the next three years, the

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Mitigation and Recovery Section staff intend to re-engage these jurisdictions and provide robust support as needed to support their hazard mitigation programs.

Additionally, the state established a new requirement for recipients of hazard mitigation planning grants. As of January 2007, a jurisdiction that is eligible for, but not already a member of NFIP, must join the program before the state will submit the local mitigation plan to FEMA for review and approval. Being a member in good standing of NFIP is a federal requirement for receiving federal grant funding for mitigation projects; the state believes that placing an emphasis on NFIP membership will improve the motivation of the jurisdiction to make hazard reduction a priority.

### *Prioritization of Proposed Mitigation Projects*

A Mitigation Grant Review Committee of state and local representatives evaluates and prioritizes eligible mitigation grant applications. The committee uses a scoring system to prioritize projects according to both federal eligibility criteria (listed in both the Mitigation Program Administrative Plan and the application documents; see Tab 8) and the state eligibility criteria listed above (published in application documents). Additionally, the benefit-cost ratio may be used as a tiebreaker when projects are reviewed and prioritized.

For each round of grant funding, a committee of at least five members, as described below, is convened:

- Two individuals from the EMD – normally the Mitigation and Recovery Section Manager and the State Hazard Mitigation Programs Manager.
- One designee from a state agency that deals with issues related to the particular type or nature of the disaster (example: Department of Ecology representative for floods).
- Two individuals representing local government from outside of the declared disaster area or from a community not applying for mitigation funds.

The committee uses a scoring system that emphasizes seriousness of risk when considering an applicant's responses to the following federal and state eligibility criteria. Among the criteria receiving greatest weight in scoring are those dealing with reduction of risk posed by hazards, prevention of repetitive losses, and protection of critical areas including frequently flooded areas and geologically hazardous areas.

Criteria for construction (both structural and non-structural) projects (from the Hazard Mitigation Grant Programs Project Evaluation Score Sheet, December 2009):

- Selection of the best alternative.

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- Applicant must demonstrate, through a written narrative that they have considered three alternatives (one being 'no action') and determined the proposed alternative to be the most practical, effective, and environmentally sound among the possible solutions.
- Federal and state criteria. Does the application/project show that:
  - It substantially reduces the risk of future damage, hardship, loss, or suffering resulting from a major disaster?
  - It addresses, minimizes, or avoids impacts to environmental/historic preservation, natural, cultural or historic resources?
  - It provides a long-term solution to a repetitive or imminently dangerous situation?
  - It solves a problem independently, or functions as a beneficial part of an overall solution?
  - It clearly describes the problem(s) to be mitigated, the project's purpose and outcome(s)?
  - It clearly defines the population that directly or indirectly benefits from the proposed project?
  - It includes details about the conceptual design, specific work components for implementation and construction, how it will be implemented, and by whom?
  - It addresses structures in repetitive flood loss areas either by acquisition, elevation, or relocation?
  - It has multiple objectives such as damage reduction, environmental enhancement, and economic recovery?
  - It has a beneficial impact on more than one community or is multi-jurisdictional?

Criteria for planning projects (from Mitigation Grant Programs Planning Application Evaluation Score Sheet, March 2007):

### Part 1. Planning process:

- How well do they describe how they will provide the public an opportunity to participate in the planning process?
- How well do they describe how they will include neighboring communities, local and regional agencies, business, academia, and other interests in the planning process?
- How well do they describe previous planning efforts and how they will incorporate them into this all hazards planning process?

### Part 2. Risk assessment element:

- If the applicant has a current Risk Assessment, does it contain a description of the type, location, and extent of all natural hazards that can affect the

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jurisdiction?

- If the community does not have a Risk Assessment, how well do they describe how they will complete it?
- How well did they document previous occurrences of hazard events and the probability of future hazard events?
- Has the applicant completed a vulnerability assessment for the hazards identified in their risk assessment that includes:
  - The types and numbers of existing and future buildings, infrastructure and critical facilities located in the identified hazard areas;
  - An estimate of the potential dollar losses to vulnerable structures identified and a description of the methodology used to develop this estimate;
  - A general description of land uses and development trends within the community so that mitigation options can be considered in future land use decisions.
- If the applicant has not completed a vulnerability assessment, how well did they describe how they will complete the above elements of a vulnerability assessment?

### Part 3. Mitigation strategy element:

- If the applicant currently has a mitigation strategy, does it contain a description of local mitigation goals and objectives with proposed strategies, programs, and actions to reduce or avoid long-term vulnerabilities to the identified hazards?
- If not, how well does the applicant describe how they will develop these goals, objectives, strategies, and programs?
- Has the applicant conducted an analysis of a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each identified hazard, with particular emphasis on new and existing buildings and infrastructure?
- If not, how well did they describe how they will complete the analysis and what areas it will cover?
- How well did the applicant describe how they will develop an action plan describing the actions in the analysis element and how they will prioritize and implement the plan?
- Did the applicant develop a set of specific cost effective mitigation projects that will reduce damages from future disasters that included a summary of how they identified and prioritized these actions?
- If not, did the applicant describe what types of projects they might consider and how they would prioritize them?
- Did the applicant describe how these actions will support the mitigation goals and priorities of the community?
- Did the applicant provide a description of their process to reduce the number of NFIP target repetitive loss properties in the community that included a summary of the process?

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- If not, did the applicant describe how it would address the repetitive flood loss issue in their community?
- How well did the applicant describe how their community is committed to reducing damages from future natural disasters through the development of partnerships with businesses, academia and other private and non-profit interests able to provide financial or technical assistance in support of the community's mitigation goals and priorities to include specific examples of any current activities?
- How well did the applicant describe the development trends within their community and discuss actions to mitigate disaster losses in these areas?
- Did the applicant discuss if their plan will require any interagency agreements to implement?

Part 4. Plan maintenance element. How well does the applicant address the following?

- A section describing the established method and schedule of monitoring, evaluating, and updating the mitigation plan within a five-year cycle.
- A process by which the applicant will incorporate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans.
- A discussion on how the community will maintain public participation in the planning process.
- Plans for formal adoption of the plan by the community.
- A section describing how the local plan will be implemented and administered by the local government including discussion of how officials will approach and manage mitigation actions involving the acquisition of private property.

Additionally, to be eligible for hazard mitigation grant funding, potential grant applicants that are eligible for NFIP have to demonstrate they are in good standing with the program, and cities, counties and towns must have either a current approved Critical Areas Ordinance and / or a current approved comprehensive land-use plan as required by the State GMA.

Once the Mitigation Grant Review Committee evaluates and ranks proposed applications in priority order, the State EMD's Mitigation and Recovery Section forwards the ranked applications to the Region 10 office of FEMA for additional review, approval, and funding.